

Carbon border adjustment, trade and climate governance. Issues for OPEC economies

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Abstract

The relation between the climate regulation and the multilateral trade regime is a rising issue in the field of international governance. This paper presents the options available to Organization of Petroleum Exporting Countries' economies related to this. It analyses the option of introducing a carbon tax or border adjustment measures in the core of the World Trade Organization (WTO) regime. It demonstrates that this option is not sustainable for both institutional and political economy reasons. This is why the paper argues that the way to build a climate-compatible trade regulation that takes into account oil-exporting countries' interests is to elaborate a cross-institutional cooperation between the WTO and the United Nations Framework Convention on Climate Change.

1. Introduction

For both production and consumption purposes, Organization of Petroleum Exporting Countries (OPEC) economies will in all likelihood prepare themselves for a post-oil economy. They will be subject to negative externalities related to both climate change and response measures taken to reduce greenhouse gas emissions. One of the major rising questions of the post-Kyoto climate regulation is the relation between climate and trade policies (Brewer, 2010).

There are in the European Union (EU), the United States and other countries many studies and thinking about the way to link trade and climate regimes (Biermann *et al.*, 2010). This question is linked, on the one hand, to the production and the exchange of goods containing carbon and on the other hand to the establishment of industrial and development policies. This is why it is an issue of great interest to OPEC members be they or not members of the World Trade Organization (WTO).¹ The linkages between trade and climate change refers, for example, to issues such as tariffs and non-tariffs barrier to trade, investment and technology transfer regarding climate-friendly goods and technology, border measures that address international competitiveness, government procurement,

subsidies programmes that promote exports, foreign direct investments and technology transfers especially to emerging and oil-exporting countries.²

The policies to reduce greenhouse gases have raised concerns about the adverse competitiveness effects for energy-intensive and export-oriented sectors and the allocational effects of border tax adjustment or border carbon adjustment (BTA/BCA) (Dröge and Kemfert, 2005; Grubb and Neuhoff, 2006). The literature on computable general equilibrium (CGE) has mainly focused on assessing competitiveness and leakage effects associated with the implementation of these policies, especially in the EU and the United States (Peterson and Klepper, 2008). Over this, climate mitigation policies that target oil consumption will slow growth in OPEC countries revenues from oil exports (Dessai, 2004). The imposition of carbon taxes—or any equivalent measures—by developed countries is able to reduce demand for oil and may cause a decline in the global price of oil.

This paper deals with the multilateral trade strategies that would contribute to the articulation of both climate and trade regimes. The lack of a consensus on a global climate agreement for post-2012 could make the WTO the main arena where the future global regulation against climate warming could be elaborated and implemented such as a border tax adjustment.³ This is why OPEC countries should be aware of the different policy options available within the WTO and the ways synergy between climate and trade regulation could be built on taking into account their trade and development interests. Oil-exporting countries must pay attention to any trade and climate regulation that could reduce their right to export fossil fuels.

The idea that we wish to promote here is that of climate-compatible regulation of international trade, which places the focus on how trade policy can be put to the service of climate change mitigation and adaptation. The aim would be to build on the existing climate and trade regimes to create fair, inclusive and effective regulatory mechanisms that would take into account the interests of both developing and oil-exporting countries. The expression ‘climate-compatible regulation of international trade’ highlights the central premise of the paper: the need for cross-institutional cooperation on climate change, i.e. a system of multilateral governance linking the United Nations Framework Convention on Climate Change (UNFCCC) with the WTO Agreements.

Thus, after examining the global economy associated with commitments made to fight against climate change, we will examine the extent to which border adjustment measures would be compatible with the World Trade Organisation regime, in particular the 1994 General Agreement on Tariffs and Trade (GATT). Because the compatibility of a CO₂ tax with the multilateral framework is a highly problematic issue, we will examine the possible strategies open for drawing up its proposed climate-compatible regulation. Three options are presented. The first would be to liberalise trade in environmental goods and services (EGS) as an incentive to combat climate change. The second would be to grant

derogation from the multilateral norm. The final option would be to create a cross-institutional cooperation between the UNFCCC and the WTO.

2. Competitive versus development issue

As regards the implementation of an international mechanism to fight climate change, the socio-economic costs of reducing emissions, as well as those of preventive and adaptive measures, remain unclear. However, as the situation currently stands, the cost of the policies required in this area is unevenly spread between countries. What is more, in the absence of enforcement mechanisms and effective dispute resolutions, which remain the main weakness of the Kyoto Protocol (Barrett, 2008), the problem of international competitiveness rears its head. In fact efforts to reduce emissions will change the market prices of traded goods, causing comparative advantage in greenhouse gas-intensive industries to shift towards other countries (Wooders and Cosbey, 2010). This is because developing countries have no quantitative reduction targets while in developed countries the terms of implementation of emission reduction targets generate additional costs for certain industries. In a context of economic globalisation, in which one of the main characteristics is the great freedom of capital and firms, the Kyoto basic architecture gives producers without carbon-constraints comparative advantages. Industries in developed countries are therefore confronted with a double-edged competitiveness problem, affecting both exports to non-industrialised countries and their competitive position in the internal market.

As Roberts and Parks (2007) argue in relation to the distributional problem of the Kyoto Protocol, the changes induced in the position of countries in the global division of labour reduce the prospect for cooperation. Thus, the cost of CO₂ emission reduction policies could lead to a significant drop in the competitiveness of companies subject to carbon constraints, with some transferring production to regions where production methods are less energy efficient (Cowi-Unice, 2004; Reinaud, 2004).⁴ The extent of the risk of industrial migration as a result of carbon emissions taxation will vary greatly depending on the different sectors and industries (SQW, 2006; Cosbey and Tarasofsky, 2007). The studies available indicate that energy-intensive or electricity-hungry sectors that are unable to pass on the extra cost of carbon emissions to consumers and which have no scope for reducing other production costs (e.g. the steel, metallurgical, aluminium, cement, glass, paper and oil refining industries) will be those most seriously affected.⁵ The competitive issue must be viewed in strategic terms rather than on a static, immediate basis. At this level, the New International Economics focuses on the dynamic effects of a marginal and temporary loss of competitiveness on both the industrial specialisation of a geographic area—such as the EU—and the growth path of this area (Gomory and Baumol, 2000; Rivera-Batiz and Oliva, 2003).

The literature draws attention to the costs of implementing climate change mitigation policies and discusses in particular: (i) whether countries embarking on stricter climate policies will shift from consumption of domestically produced carbon-containing goods to cheaper carbon-intensive imports from regions without comparable climate change policies (leakage issue); and (ii) whether they would spur the offshoring of carbon-intensive production to such regions (Lockwood and Whalley, 2010).

All OPEC economies are Non-Annex I parties, which means that they do not have any obligations regarding greenhouse gas emission reductions. This does not mean as Barnett (2008) argues that they avoid reductions in the emissions of greenhouse gases and '*work very hard to block and delay progress in the climate change*'. OPEC economies are facing a huge challenge related to the fact that any requirements that would encourage the transition to a low-carbon economy could unfavourably affect their economies especially if the low-carbon economy transition is biased towards oil (Karas *et al.*, 2005; Reddy and Assenza, 2008). So, the linkage between trade and climate regimes could affect the OPEC countries sustainable development. This is why the Article 4.7 provides a balance of obligations among UNFCCC Parties, which requires that 'the extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties'. The Article 4.10 adds that 'the Parties shall (. . .) take into consideration in the implementation of the commitments of the Convention the situation of Parties (. . .) with economies that are vulnerable to the adverse effects of the implementation of measures to respond to climate change. This applies notably to Parties with economies that are highly dependent on income generated from the production, processing and export, and/or consumption of fossil fuels and associated energy-intensive products'.

However, there is concern that the use of trade measures by developed countries that apparently address climate change issues may in fact lead to restricting the market access of countries like OPEC members in developed countries. The World Bank (2008) modelisation of the competitiveness effect of carbon-based border adjustment measures implies that such measures imposed by developed countries could reduce the export opportunities of developing countries to some extent. In the United States and European Union BTA/BCA are increasingly considered as a 'price of passage' for any ambitious climate legislation (Yu III, 2009) as they require importers of energy-intensive goods to pay additional tax or to purchase emission allowance at the border or even to impose restriction in respect of '*foreign-emitted carbon*' (Pauwelyn, 2007). Trade-related environmental measures (TREMS) designed to 'level the playing field' between countries that have put in place different degrees of climate regulation in place, are now being considered as part of the

‘climate package’ in number of major trading economies (UNEP, 2009). Or, as Hagen *et al.* (2003) show, any sanctioning mechanism for non-compliance could lead to a welfare decrease in the OPEC region.

So, the issue of a BTA/BCA taken by industrialised countries is related to the economic development strategy and socioeconomic stability of oil-exporting countries. Climate mitigation and adaptation policies taken by Organization for Economic Cooperation and Development (OECD) countries for example and that target oil consumption will slow growth in revenues from oil exports. This in turn could affect the capacity to finance the need for technical assistance for economic diversification to improve industrial and energy infrastructures, to develop renewable energy technologies and to commit in ‘ecological modernisation’ (Reiche, 2010). In fact climate change negotiations are an opportunity to start diversification strategies if the multilateral trading system allows a policy space for it.

By highlighting these issues, the combat against climate change raises questions about the conditions of trade and investments that place it on the margins of the field of competence of the WTO’s multilateral trade regime. We shall now examine the limits of the way the WTO regime deals with the issue of climate change.

3. WTO rules and agreements related to climate change measures

There is no consensus on whether the WTO should adopt a position on climate change or even whether the latter has a place in the WTO regime (Horn and Mavroidis, 2010). As Pascal Lamy, the WTO Director General, said ‘trade and the WTO toolbox of trade rules more specifically, can—at best—offer no more than part of the answer to climate change. It is not in the WTO that a deal on climate change can be struck’.⁶ But the WTO Agreements contains a set of rules that could be used to link trade and climate policies. The details are shown in **Table 1**.

Is a border adjustment measure compatible with the WTO regime? How the nature of a carbon tax or a tax on the carbon content of fossil fuels should be interpreted remains ambiguous (Goh, 2004).⁷ The Border Tax Adjustment Working Party under the GATT did not reach any agreement. The manner in which the WTO Members will behave is a political rather than legal issue, as the issue relies on the existence of a gentleman’s agreement between WTO members (Hoerner and Muller, 1996). In practice, the problem must be addressed on a case-by-case basis within the scope of the WTO procedure for dispute settlement. Subsidies pose no problem as long as they are not specific to a sector, a company or a product.

The feasibility of a border adjustment measure presupposes that it is compatible with the principles of trade multilateralism, in particular Article III of the GATT 1994 relating to national treatment.⁸ If, for example, the EU were to introduce such a measure it would

Table 1 The World Trade Organization (WTO) rules related to climate policies

| Climate measures | General Agreement on Tariffs and Trade (GATT)-WTO related agreements | | | | | |
|--|--|------|--------------------------|---------------------------------------|------------------------|-----------------------------------|
| | GATT | GATS | Agreement on agriculture | Subsidies and countervailing measures | Government procurement | Trade investment-related measures |
| Regulatory measures | | | | | | |
| Renewable energy regulation | × | × | × | × | × | × |
| Energy standard and labels | × | × | | | × | × |
| Fiscal measures | | | | | | |
| Carbon/energy taxes | × | × | × | × | | |
| Energy subsidies | × | × | × | × | | |
| Border tax adjustment on import | × | × | × | × | | |
| Border tax adjustment on export | × | × | × | × | | |
| Market-based and incentive measures | | | | | | |
| Kyoto flexibility mechanisms (emission trading, CDM, joint implementation) | × | × | × | × | | × |
| Market for low carbon goods and services | × | × | | | | |
| Government procurement | | | | | × | |

Source: Composition of the author.
CDM, clean development mechanism.

need to be specific regarding the three following themes, though this would be no guarantee of compatibility.

3.1. The basis of the tax

The BTA/BCA could only be applied to basic high-emission products or those that are very sensitive to electricity prices. But a border tax adjustment is only permitted in the case of so-called taxes ‘on the product’, as in the case of VAT. It cannot be applied to so-called taxes ‘on production’ or ‘on the producer’. The WTO regime is considered to address primarily regulations aimed at products rather than production. Thus, tax on the latter cannot normally be adjusted at the borders. This characteristic makes it necessary to clarify environmental taxation, as well as its relationship with domestic taxation and with measures to regulate access to the markets.

3.2. The effects of the measure

GATT/WTO jurisprudence has always concluded that the volume of trade has no bearing when it comes to adherence to the provisions of Article III of the GATT. The only factor to be considered is whether or not competition distortion occurs.⁹ Similarly, even the existence of a minimum tax differential is enough to establish discrimination between like products. With reference to Articles III.1 and III.2, the ‘Korea—Taxes on alcoholic beverages’¹⁰ panel concluded that the WTO regime does not tolerate a ‘minimum taxation amount’ and that the requirements of Article III of GATT run counter to a measure that favours domestic products, even if trade is not disrupted or the measure has not yet been implemented.

3.3. The similarity of products

The GATT/WTO texts lack criteria that would make it possible to decide whether or not two or more products are similar, or ‘like’. Two doctrines come into conflict here. The first states that products obtained using different production processes cannot be considered as ‘like products’. Production process and methods (PPMs) may also be at the root of a distinction between products under the terms of Articles I and III of the GATT (Chaytor and Cameron, 1995). The second doctrine considers that likeness depends on physical properties, nature and quality, on end-uses, on consumers’ tastes and habits, as well as on the tariff classification of products. In this case, the production process used to make these products does not come into consideration when assessing their likeness. GATT/WTO jurisprudence tends to favour the latter of the two doctrines. Furthermore, any product standards or technical regulations that establish minimum requirements for goods on the basis of their energy or greenhouse gas emission during production might conflict with the national treatment principle under the WTO and the GATT-1994 (Santarius *et al.*, 2004).

However, the debate is not over, since according to the Appellate Body, the notion of similarity must be examined on a case-by-case basis depending on the context and circumstances. This grants panels a discretionary margin when weighing up the criteria to be used and their respective importance. For example, there is a certain amount of ambiguity in considering that the hazardousness and toxicity of a product can be used as differentiation criteria.¹¹ This paves the way for the assertion that a CO₂-intensive product is more hazardous than another 'like' product with a lower CO₂ content. However, because the Agreement on technical barriers to trade indicates that 'Members shall specify technical regulations based on product requirements in terms of performance rather than design or descriptive characteristics' (Article 2.8), it is necessary to prove that divergent methods have an impact on the intrinsic quality of products. The main conclusion is that only a dispute settlement on the question of using a carbon tax to fight against climate change is likely to resolve the issue of targeted trade measures favouring climate change mitigation. But there is no guarantee that it will result in a definitive solution that is in line with the measure's environmental aims.

In this section we focused on carbon-motivated tax adjustments and whether such a measure is WTO compatible. The trading regime and jurisprudence of the WTO would allow in theory for the creation of targeted trade measures favouring the fight against climate change. But considerable uncertainty prevails (Frankel, 2008). Only the settlement of a dispute on an issue of this nature is likely to resolve the possible incompatibility and there is no guarantee that it would result in a definitive solution that would be in line with the measure's environmental aims.

However, because of its economic, social and political implications, the climate change agenda is much more complex than other issues addressed by other multilateral environmental agreements (MEAs). It calls for changes in production, consumption and growth models both in developed and developing countries. It is unlikely that a tax would be enough to 'decarbonise' economic growth. What is needed is a more wide-reaching solution that can be achieved by including environmental compatibility in the trade regime. We shall now go on to discuss this policy option, which would involve a climate-compatible trade offer, derogations from the WTO Agreements and the creation of a UNFCCC-WTO governance system.

4. A political economy of climate-compatible trade regulation

It is possible that some OECD countries draw up trade offer for developing countries that would reflect their concerns and constraints. This calls for a new balance to be established between trade rights and obligations. The WTO consensus rule requires and encourages to seek the broadest possible compromise. But the principle of joint but differentiated responsibility affords developing countries a special status that complicates the use of

trade policy instruments when dealing with these nations. This is reinforced by the provisions of Article XXXVII.1.c of GATT 1994, which normally prohibit 'new fiscal measures' from being imposed upon them. That is why compensatory measures are necessary. What is more, such measures underline the fact that the primary objective is not to discriminate against countries but to support the fight against climate change.

The EU and the United States could set up a 'Generalised System of Preferences Plus' (GSP+), which would benefit those countries that agree to make additional efforts to reduce CO₂. Thus if the United States grants no trade preferences to China or oil-exporting countries, nothing prevents the EU from granting a GSP+ to countries that commit to multilateral mechanisms to combat climate change, insofar as these preferences are based on objective criteria in accordance with the conclusions regarding the European Community (EC)-GSP dispute. However, this strategy could come up against two obstacles. Firstly, the inclusion of climate policy objectives in the GSP could be perceived by developing countries as a form of political conditionality. Secondly, unless the content and form of this GSP+ is clearly defined, such a measure may come into conflict with the principle of 'Common But Differentiated Responsibility' (CBDR) contained in the Convention.

Lastly, the paragraph 31.1 of the Doha Declaration defines a mandate related to the liberalisation of trade in green products, services and technologies. The *Friend of EGS*¹² emphasised that a WTO-wide deal eliminating all tariffs on trade in green technologies and energy-saving equipment would be the way to a business-friendly global solution to climate change. They also stated that any post-2012 agreement should include the creation of an open global market in environmental technologies and an investment regime supporting green industrial change. They consider that through this solution trade policy can help create incentives to the adoption of good environmental policy.

As things stand, negotiations have come up against the problem of definitions and the classification of environmental good and services,¹³ the inclusion of production methods and processes in the scope of negotiations, the inclusion of non-tariff barriers, how liberalisation should be approached (list approach, project approach, integrated approach) (Sugathan, 2008) and how to deal with products that also have non-environmental uses. Thus, talks are not progressing either in substance or in form. Furthermore, total liberalisation of trade in EGS would concern only a marginal volume of trade and goods that already have very low average tariffs. In addition, there is no strong potential for the liberalisation of trade in low-carbon goods to contribute to climate change objectives (Cosbey, 2008). Last, the final stumbling block in these negotiations concerns the resulting differentiation between North and South, the developing countries being net importers of EGS and related clean energy technologies. Liberalisation would benefit only developed countries and a few emerging economies (Brazil, China, India and Mexico) (Claro *et al.*, 2007). Focussing on this type of solution would thus

exacerbate trade antagonism between North and South, something that is not needed by the WTO nor by those involved in climate change negotiations.

5. Building synergies by a derogation from the multilateral trade rules

A BTA/BCA could be introduced in the multilateral trading system to obtain derogation by using the argument of the non-trade objective. Such environmental exemption from the multilateral trade rules can be achieved in two ways.

The first involves starting a procedure under the terms on Article IX.3 of the WTO Agreement. In fact, Article IX.3, ‘in exceptional circumstances’ and in the framework of a Ministerial Conference, authorises a Member to request a waiver concerning its obligations under the WTO Agreements. The Member may be granted this waiver only by consensus or by a decision taken by three quarters of the Members. A member must prove that the climate change mitigation measures that it intends to implement fall into the category of ‘exceptional circumstances’. Once this has been done, this member must embark upon a consensus building strategy in order to have the request accepted by the Members of the WTO, since the recognition of ‘exceptional circumstances’ concerning a measure taken by a Member is based on their appraisal. Oil-exporting countries should be aware of the possibility that the developed countries—EU especially—could build such a consensus. This could allow them to take measures that would restrict trade for climatic purpose.

The second is linked to Article XX of the GATT 1994. Article XX is not to be confused with a waiver of WTO obligations that may be granted to a Member under Article IX.3 of the WTO Agreement. A waiver is a formal derogation granted by WTO Members to a Member or a group of Members at the request of the latter, whereas Article XX is invoked in the context of a dispute, as an affirmative defence. The purpose of Article XX is to control the conditions under which Members may pursue or seek to achieve non-trade objectives. It comprises a series of exceptions that States are entitled to invoke and a ‘chapeau’ designed to prevent States from abusing the facility.

Paragraphs (b) and (g) on measures to ‘protect human, animal or plant life and health’ and measures relating to the ‘conservation of exhaustible natural resources’ may be invoked in the context of climate change. The aim under paragraph (b) would be to demonstrate that a tax would be a necessary additional measure to ensure the effectiveness of the tradable emission permit system or, under paragraph (g), that it relates to the conservation of exhaustible natural resources that could be affected by climate change. Furthermore, plans to introduce a border adjustment measure would have to fulfil the two conditions under the ‘chapeau’ of Article XX. The measure: (a) must not constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail; and (b) must not constitute a disguised restriction on international trade.

Lastly, in the case of justification under paragraph (b) of Article XX, the measure would have to pass the ‘necessity test’. Neither the Convention nor the Protocol permit the use of trade measures to bring countries on board or encourage implementation. In fact Article 3.5 of the Convention (to which Article 2.3 of the Protocol refers) prohibits the use of trade measures in attaining its objectives.¹⁴ The primary source of information for the dispute settlement procedure resides in the WTO Agreements. The Articles 4.8.h in the UNFCCC makes special provisions for ‘countries whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy-intensive products’. Thus it provides OPEC with a legal basis for challenging any trade regulation that could affect their petroleum trade. As the Appellate Body recalled in the United States—Gasoline dispute settlement (1996), citing Article 3.2 of the Dispute Settlement Understanding of the WTO Agreements, WTO law should not be read in ‘*clinical isolation*’ from public international law. This is why panels or the Appellate Body will never go beyond what is provided for in the UNFCCC (Appleton, 2001). It is therefore unlikely that a trade measure would be approved, even temporarily. So, developing countries and oil exporters can argue that the next climate agreement contain a clause forbidding the use of a tax or any other trade means aimed at getting an agreement on emissions reductions.

In the WTO, decisions have to be taken by consensus. The consensus rule gives power to countries who are objecting to specific decisions. This is why OPEC would insist on linking trade and climate regime, and if this occurred, it would have to be addressed within the WTO. The increasing heterogeneity along other variables such as growth, population, emission, development and importance for the international economy is creating incentives among the most successful G77 states (China, India, Brazil) towards bilateral or major emitting agreements with industrialised countries. Here again multilateral fora (WTO, UNFCCC) have to be preferred. In order to control the construction of the synergy between the WTO’s agreements and MEAs, OPEC should increase the speed of its full membership demand process to the WTO’s Committee on Trade and Environment. Presented in October 2000, this request still has not been completed.

The situation that prevails since Cancun conference requires a rethinking of international cooperation in the framework of a regime that would rest essentially upon national and/or regional initiatives. In order to avoid that unilateral trade measures be taken and a fragmentation of the climatic governance it seems opportune to think about a cross-institutional cooperation between the UNFCCC and the WTO.

6. Towards a trade and climate governance system

The Copenhagen and Cancun agreements institute a situation where different regional groups will exist in the long term with different levels or requirements and climate policies

that would lead to very different carbon prices. Hence the risk of trade measures to compensate for these discrepancies is a real.

To avoid such a situation, OPEC members could adopt a positive agenda promoting the option of cross-institutional cooperation aimed at climate-compatible regulation of international trade. This option involves creating a joint WTO and Climate Convention working group.¹⁵ The remit of this working group would be threefold: (i) to set forth a list of environmental measures that are compatible with the WTO regime; (ii) to clarify which of these two regimes takes precedence on questions of rights and obligations; and (iii) to remove any ambiguities that may cause conflicts relating to standards and jurisdiction (competence) between the Convention and the WTO Agreements. It seems necessary to bring further scientific economic and policy expertises on climate-trade linkages. This function might be the main one of the proposed cross-institutional governance system.

If this work were to result in clauses and rules that specify links to the WTO Agreements, clauses that do not form part of the WTO regime, these would not legally bind panels or the Appellate Body, but would serve as a point of reference for the decisions they may be required to make. This is an important point that would help eliminate ambiguities as to the decisions made by the arbiters of international trade. In the long term this *trans*-institutional cooperation should be oriented towards the building of a carbon taxation international regime WTO friendly.

The future climate regime will inevitably be a hybrid one, as the future framework for global climate governance will need to combine credible commitments, stability and flexible obligations. The UNFCCC is a closed system that all the countries have ratified. Thus the issue is not so much about non-Parties, but rather about Parties with less stringent commitments as the developing countries characterised by lower wages, large populations and strong growth and rapidly growing emissions are, as well as from the United States.

Developing countries and OPEC must stress the links between the CBDR principle (Article 3.1 of the UNFCCC) and the Special and Differential Treatment of the WTO Agreements. This would make it possible to start anew the negotiations for the Framework Agreement on Special and Differential Treatment of the Doha Agenda, with the aim of making it compatible with the CBDR. As discussed by Yoshiro, the interpretation of CBDR may involve different rights and obligations, giving more flexibility to developing countries, a large time frame for implementing measures and also undertakings from developed countries to help developing countries by means of financial transfers, trade preferences or technical assistance (Yoshiro, 2002). In fact the WTO regime has competence on these issues. Thus, the studies and discussions of the *Working Group on trade, debt and finance* and the *Working group on trade and transfer of technology* could be developed and expanded to include climate change adaptation. Here too the issue is raised of building links with the multilateral trading regime. In the case of technology transfers, compliance with the criteria of the WTO TRIPS Agreement would need to be verified.

Developing and oil-exporting countries need to be able to access the best available technology and patented green technologies in a flexible and non-constraining manner. They could ask for a Green-TRIPs derogation, for example.

Thus, it is not enough to implement a strategy of liberalising trade in EGS. In order to guarantee the participation of the developing countries in post-Kyoto process, the industrialised countries must adopt a strategy to include trade, technology transfers, financial assistance and sustainable development commitments related to the level of development of the different countries and to their specific needs.

7. Conclusion

The fight against climate change involves economic issues at a scale unknown in existing MEAs.

We analyse the issue of introducing a carbon border adjustment mechanism in the WTO regime. The design of this mechanism is extremely important, yet despite the efforts made in this respect there would still be uncertainties as to its legal acceptability. We therefore went on to explore the policy option of designing a climate-compatible trade agreement, what we call climate-compatible trade regulation. Four options were discussed and we stressed on the cross-institutional cooperation between UNFCCC and WTO. Ideally, the governance system would feature differentiated quantitative objectives to which all 194 UNFCCC Member States would commit, accompanied by financial and technological transfer guarantees and trade incentives related to the level of development, which would be compatible with the Special and Differentiated Treatment of the WTO and the Common But Differentiated Responsibilities of the UNFCCC.

We maintain that moving away from a regime of carbon-intensive growth or creating a low-carbon economy, which is the key economic stake of climate change mitigation and adaptation, cannot be approached through the single issue of competitiveness and BTA/BCA measures. New approaches will be needed to engage with energy exporters a transition towards a low carbon economy. This requires a better understanding of their interests, economic, political and social priorities. It seems to us that a *trans*-institutional cooperation is able to provide enough flexibility to deal with the heterogeneity of the international community.

OPEC's economies are faced with a dire challenge of diversifying their economies. Thus, they should adopt a positive agenda that would take into account their specific development constraints and objectives. This agenda implies that: (i) their oil exports will not be faced with constraints for climate purposes; (ii) the green technology transfer issue will be answered by creating additional flexibilities under the Agreement on trade-related aspects of intellectual property rights (TRIPS) to facilitate the transfer of low-carbon technologies; and (iii) building and introducing flexibilities in the WTO agreements related to

their specific needs and constraints; (iv) negotiating an agreement defining the condition when unilateral trade measures, such as BTA/BCA would be acceptable and (v) the UNFCCC's common and differentiated responsibility principle be clearly and operationally articulated to the WTO's principle of special and differential treatment.

Notes

1. Excepting Algeria, Iran, Iraq, Libya who are observer governments and United Arab Emirates who are not even an observer, all others OPEC members are also WTO members.
2. Many different trade policy measures, with quite different implications, could be listed as border adjustment measures: countervailing carbon tariffs levied on the carbon content of goods, voluntary export restraints arrangements with nations without carbon controls, exemption of energy-intensive sectors from carbon policy, the rebate of carbon taxes on energy-intensive exports and the subsidisation of energy-intensive exports.
3. For example, on 13 September 2010 Japan has initiated a trade dispute against Canada related to renewable energy and on 6 January 2011, United States has initiated one against China related to wind power equipment. This could create a precedent to the way the WTO catch up the international climate regulation debate.
4. The Intergovernmental Panel on Climate Change (IPCC) in its 2001 assessment concluded that 'the possible relocation of some carbon-intensive industries to Non-Annex I [developing] countries and wider impacts on trade flows in response to changing prices may lead to leakage in the order of 5 to 20 per cent' [IPCC, 2001]. If an emissions reduction of 5 per cent were to be achieved in industrialised world, which is what the Kyoto Protocol calls for, 1 per cent of these emissions would not disappear completely, but would become developing-world emissions due to shifting industrial activity (World Bank, 2008).
5. For example, Grubb and Neuhoﬀ (2006), using the NVA_S (net value at stake), which represents the sector's exposure to indirect costs through electricity price impacts, show that three sectors: cement, iron and steel and non-ferrous metals (principally aluminium) and some sub-sectors (glass and ceramics, chemicals) will be affected by cost constraints.
6. Pascal Lamy, Director General, speech at the Informal Trade Ministers' Dialogue on Climate Change in Bali on 8–9 December 2007 available at http://www.wto.org/french/news_f/sppl_f/sppl83_f.htm
7. Taxing finished products is problematic not just in view of the taxes on the materials used in their productions, but also for three reasons linked to the WTO system: (i) the tax terminology and typology contained in Article III.2 is unclear; (ii) in the absence of a consensus, the working Party on border adjustments has made no ruling; and (iii) the definition of tax occultes adopted by the Working Party document leaves some doubt over the feasibility of carbon tax.
8. Article III of the GATT prohibits discrimination between domestic products and imported products. Article III.1 sets out the general principle of prohibiting protectionist measures. Article III.2 prohibits the discrimination created by internal taxation, while Article III.4 prohibits discrimination created by international regulations of a non-tax nature. Both of

these provisions prohibit discrimination between like products but the scope of the term is different between Article III.2 and Article III.4. Article III.2 also prohibits discrimination against competitive or substitutable imported products.

9. Japan—Taxes on alcoholic beverages; United States—Taxes on oil and certain imported products; India—Measures relating to the automotive sector.
10. For details see DS75 and DS 84 ‘Korean, Republic of—Taxes on Alcoholic Beverages’ at http://www.wto.org/english/tratop_e/dispu_e/dispu_status_e.htm
11. In the Asbestos dispute, the Appellate Body considered that a product’s hazardousness could be taken into consideration from the moment it affected the product’s physical properties or governed the competitive relationship between products on a given market.
12. The Friends of EGS Group of countries comprises: Canada, the EU, Japan, Korea, New Zealand, Norway, Switzerland, Chinese Taipei and the United States.
13. This being so, the OECD, Asia-Pacific Economic Cooperation and the United Nations Conference on Trade and Development have defined nomenclatures for EGS according to different, but sometimes convergent, criteria.
14. Article 3.5 of the UNFCCC notes that ‘The parties should cooperate to promote (. .) [an] open international economic system’ and that ‘measures taken to combat climate change, including unilateral ones, should not constitute a means of arbitrary or unjustifiable discrimination or disguised restriction on international trade’. Article 2.3 of the Kyoto Protocol notes that parties shall ‘strive to implement policies and measures (. .) in such a way as to minimize adverse effects, including the adverse effects (. .) on international trade and social, environmental and economic impacts on other Parties, especially developing country Parties and in particular those identified in Article 4, paragraphs 8 and 9, of the Convention, taking into account Article 3 of the Convention’.
15. The UNFCCC Secretariat has been granted observer status in the WTO’s Committee for Trade and Environment, allowing it to attend the discussions and negotiations held within the latter.

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